



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/797,316

03/09/2004

Thomas E. Ricciardelli

2601.106

4292

7590

01/08/2007

Jerry M. Presson
95 Golden Hill Road
Trumbull, CT 06611

EXAMINER

DANIELS, MATTHEW J

ART UNIT

PAPER NUMBER

1732

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
--	-----------	---------------

3 MONTHS

01/08/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/797,316

Applicant(s)

RICCIARDELLI ET AL.

Examiner

Matthew J. Daniels

Art Unit

1732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 10-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 3/9/04.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-9, drawn to a method, classified in class 264, subclass 511.
 - II. Claims 10-22, drawn to an apparatus, classified in class 425, subclass 116.
2. Inventions I and II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the apparatus could be used to practice another and materially different process, such as (a) injection molding onto a metal preformed lamina, (b) injection molding without a preformed lamina, or (c) injection molding of ceramic slurries.
3. Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions have acquired a separate status in the art in view of their different classification, their recognized divergent subject matter, and because the inventions require a different field of search (see MPEP § 808.02), restriction for examination purposes as indicated is proper.
4. During a telephone conversation with Jerry Presson on 27 December 2006 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-9. Affirmation of this election must be made by applicant in replying to this Office action. Claims 10-22 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Art Unit: 1732

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Information Disclosure Statement

6. Item "AR" on the 9 March 2004 IDS corresponds to U.S. Patent Application number 10/769364, which is published as US 2005/0166513.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. **Claims 1-9** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. **As to Claim 1**, the claim recites "predetermined period of time" which is indefinite where "predetermined" means only that the variable is determined ahead of time.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

Art Unit: 1732

such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 1 and 3-5** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ricciardelli (USPN 6306318) in view of Visconti (USPN 6093272). **As to Claim 1**, Ricciardelli teaches a method of making a composite floor tile comprised of a substantially flat polymeric substrate having top and bottom surfaces (Figs. 3 and 4), comprising the steps of providing a two-platen injection molding machine with first and second aligned mold halves (Fig. 2), forming an open ended cavity in the first mold half with a predetermined substrate design shape and a second open ended cavity in the second mold half (Fig. 2, items 56 and 58), closing the mold halves for a predetermined time to form a mold cavity for molding the tile therewithin (7:13-15), injecting the polymeric material into the cavity under a pressure sufficient to fill the first cavity (6:66-7:4), cooling the enclosed mold cavity to solidify the injected substrate material, wherein the substrate is molded (7:14-15).

Ricciardelli is silent to the following aspects of the instant invention:

- (a) A first fixed mold and second movable mold halves
- (b) the preform lamina and a second mold half having sidewalls for seating the preformed lamina therein, seating the preformed lamina, and bonding the molten substrate material to the bottom lamina surface, wherein the substrate is molded to the lamina.

However, these aspects would have been prima facie obvious over Ricciardelli or Visconti for the following reasons:

- (a) The same relative movement is provided between the mold halves of Ricciardelli the method is performed in substantially the same way regardless of which of Ricciardelli's mold halves moves. Alternatively, it would have been prima facie obvious to the ordinary artisan to fix one

Art Unit: 1732

mold half in order to maintain a fixed connection between the extruder of Ricciardelli and the mold inlet.

(b) Visconti teaches a preformed lamina inserted into a second mold half having sidewalls for seating the lamina therein, and injecting molten material which would bond to the bottom lamina surface (Figs. 5, 7, and 3:27).

It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Visconti into that of Ricciardelli in order to provide a surface having a color and pattern chosen by a designer to provide an aesthetically pleasing surface (Visconti, 2:25-28), or multiple colors and patterns (2:22-25).

As to **Claims 3 and 4**, Ricciardelli teaches injection within the claimed temperature range (6:28), the claimed injection pressure (7:4, 50 to 300 bar is about 725 to 4000 psi), and clamping pressure (7:13). As to **Claim 5**, Ricciardelli teaches that closure time is predetermined to solidify the material, thus closure time is a result effective variable. See MPEP 2144.05 II and *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to optimize the closure time to solidify the material of Ricciardelli.

9. **Claim 2** is rejected under 35 U.S.C. 103(a) as being unpatentable over Ricciardelli (USPN 6306318) in view of Visconti (USPN 6093272), and further in view of Strapazzini (USPN 5340425). Ricciardelli and Visconti teach the subject matter of Claim 1 above under 35 USC 103(a). As to **Claim 2**, Ricciardelli and Visconti are silent to the claimed thickness. However, the claimed thickness is conventional as an insert material in an injection molding

Art Unit: 1732

process. For example, Strapazzini teaches a 20 mil (0.020 inch) thickness, but also suggests that other thicknesses are possible (3:54-61). It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Strapazzini into that of Ricciardelli in order to select an appropriate thickness for any desired purpose (3:56-58).

10. **Claims 6-9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ricciardelli (USPN 6306318) in view of Visconti (USPN 6093272), and further in view of Poorten (USPN 4737096). Ricciardelli and Visconti teach the subject matter of Claim 1 above under 35 USC 103(a). **As to Claim 6**, Ricciardelli is silent to the vacuum. However, application of vacuum to an insert to retain its position is conventional in the art of injection molding, and is taught by Poorten (Figs. 6 and 8, items 18 and 52). It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Poorten into that of Ricciardelli in order to maintain the position of the insert in the injection molding cavity. **As to Claim 7**, Ricciardelli is silent to the claimed limitations, however, Poorten teaches that the vacuum pressure must be sufficient to position and hold an insert against a wall with sufficient force to resist removal during the molding cycle (6:30-49). Thus, Poorten teaches that vacuum pressure is an effective variable in order to maintain the insert in position. See MPEP 2144.05 II and *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to optimize the underpressure to arrive at the claimed value. Although silent to the particular specific weight, the Examiner asserts that the materials of Visconti (2:15-28) would obviously weigh about 0.1 pounds per square inch, or alternatively that it would have been obvious to the ordinary artisan to

Art Unit: 1732

select a variety of thicker or thinner lamina including those having substantially the claimed weight. **As to Claim 8**, Poorten teaches vacuum pressure applied at the edges (corners) and center portions of the top surface of the insert from the bottom of the second cavity (Fig. 8, items 18 and 52). **As to Claim 9**, in the combined method, it would have been obvious to place Visconti's decorative laminate onto the second mold and to selective apply the underpressure (vacuum) of Poorten in order to maintain the insert in a fixed position during the molding cycle. It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Poorten into that of Ricciardelli in order to maintain the position of the insert in the injection molding cavity.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew J. Daniels whose telephone number is (571) 272-2450. The examiner can normally be reached on Monday - Friday, 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1732

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MJD 12/28/06

MSD


CHRISTINA JOHNSON
SUPERVISORY PATENT EXAMINER

1/3/07